# PHOTO ERA

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AN ANCIENT FOUNTAIN AT INTERLAKEN. By W. G. CORTHELL.

## The Forums of the Peasants

WENDELL G. CORTHELL

THERE is no more interesting or more useful forum in New England than the town meeting, where every voter has a welcome and a chance to have his say. The Northerner in our country does not feel at home in outdoor discussion. He wants a hall and a crowd.

All men have had, and must have, some kind of common ground where they may meet other men as equals and talk over the affairs of the day. The Romans, not only in their capital, but in all their cities, had public forums, where the citizens were free to meet, and ofttimes dangerously free to talk.

Business men of to-day find in the various "boards," and even the "curb," a good meeting-place for modern exchange of property and ideas. The country store has long been a favorite resort for the exchange of political opinions and neighborhood gossip.

The peasantry of Europe are not devoid of the desire so common in man to meet and "talk it over." The traveler from our prosaic and more conventional country is ever charmed by the street markets, and especially by the fountain forums of many Continental peoples. How often has he watched the hard-working peasant as he chatted with a fellow laborer. As the "laborers" of Europe are as much women as men, one is always finding them by the village fountain.

What town does not provide the ever running water in the squares, or along the road, flowing into and out of the great stone troughs which are built to last for centuries? Berne, the capital of Switzerland, has no less than twenty-one famous public fountains where all may go to get water to carry to their homes.

The long stone troughs are often divided, so that one end may be used for washing clothes, while the other is reserved for cleaning vegetables.

IN OLD BERNE. By W. G. Corthell.

Night and day, through the years and centuries, the clear water runs into these public fountains, and about them centre the gossip and much of the discussion of the affairs of the hard-working peasant. Women often stand in line waiting their turn to fill great casks, which are carried on the back to houses where no modern improvement of running water in pipes is known.

There is always a fascination in the running of pure water. Old and young gather about the source of the supply of life. Women who have long been grandmothers are there hard at work on somebody's washing, and even little children are proud to have their share in the primitive laundry, which is not limited to Monday, but continues on through all the week. What a field for the photographer. What a foreign air is about these peasant forums. You know that no American picture can show such a peculiar life. It is decidedly European and picturesque. You find these subjects everywhere. In Swiss cities, and in every town, even far up the valleys, where no engine ever brought the rush of the world to the lonely peasant, running water is everywhere.

Germany is replete with these fountains; so is Italy, from the famous bronze well of the Palace of the Doges in Venice to the more humble meeting-place of the Cathedral fountain in Amalfi.

But of all countries, Switzerland is the land of forums. The Swiss are democratic; they like to meet around the village fountain and know that the national fluid is still running. The mountains and the valleys unite to keep the forums supplied, so that the streams shall never run dry, and in every city and village in all the land, when the hard-working peasant is deep in slumber, the streams in a thousand stone fountains are making merry music all alone in the forums of the people.

The writer has often been asked for advice as to the best way to secure nine good pictures out of ten exposures made in other lands. Not every one cares to waste a whole trip learning experience for the second one. In this case experience may be a good teacher, but when the lesson is learned the foreign scenes are things of the past and live only in memory. Much may be learned from the costly experience of others. It was my pleasure to expose 500 films during six months in Europe last summer, and even with all the drawbacks of improvised dark rooms for developing, I have 475 fairly good negatives. Had the new developing machine been on the market the result would have been better in number and quality.

The coming summer thousands of Americans will wander about the Old World with cameras, and many of them with anxious hearts as to the outcome of their pictorial work. Of course those who know nothing about photography will take fixed focus cameras and bring their rolls home to be developed and printed by the dealer. But to those who know something about the work at home but fear to tread new paths I offer a little advice as the result of several tours in other lands.

After much thought I took a No. 3 folding

IN A MOUNTAIN VILLAGE.

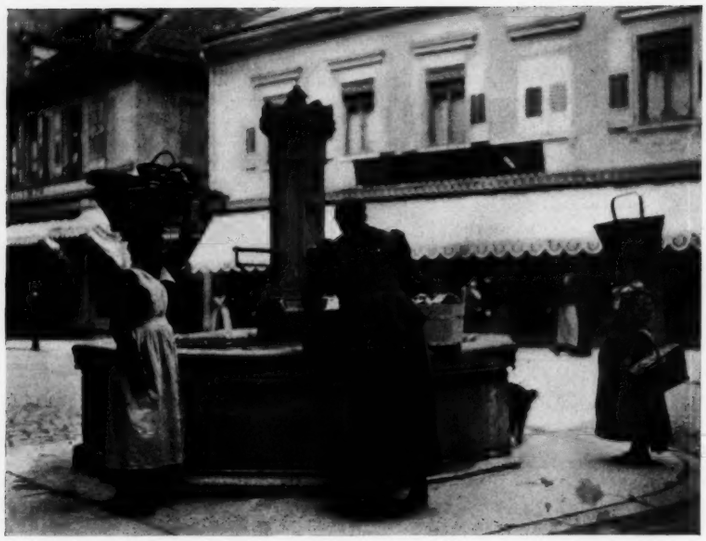
pocket Kodak with a Wollensak shutter and Goerz lens, and would do the same again. While the pictures are small, yet they are clear, and I have four times as many as I would have taken with a larger camera, which would often have been in the way or left at the hotel. I had a very light and compact tripod, but used it rarely.

FAR UP THE RHONE VALLEY.

I took many snap-shots in the rain with the diaphragm wide open and time down to one-tenth second, and always with fairly good results. It was vital at first I should know the range of the focus. If a street scene were twenty feet away, what space would the lens cover when set at that figure? By a series of experiments before going I found the depth or range of focus to be as follows: When diaphragm was set at No. 3 or 4 and focus set at 8 feet, then all between six and ten feet was in focus. When set at

A QUIET FORUM.

13 feet the range was from 7 to 16 feet. When set at 19 feet all between 10 and 25 feet was in focus. When set at 38 feet all between 14 and 50 feet was in focus. And when set at 100 feet all at and beyond 30 feet was in good focus. Stops 8 and 16 had a little wider range, the variation being mostly at a distance and not nearer the camera. And stop 16 when set at 38 feet the range was from 10 feet to 150 feet. And all stops when set at 100 feet the range was from 30 feet to any distance. Better set at too many feet rather than too near.



A BADEN-BADEN FORUM. By W. G. CORTHELL.

I took the Photo-Beacon exposure tables, and next time shall take a Wynn meter, the new one being a great aid in strange places and circumstances. Most people under exposure. Far better over expose. There is a wide range in exposure, and better err on the strong side. Correct exposure does not mean an absolute time. Correct exposure for a scene might be anywhere from 1-10 second to 1 second and the result the same for all practical purposes. This is the secret of the success of the developing machine. By all means take one of the machines and know every few days how things are going. In the confusion of a hundred other things to think of in traveling you may have omitted some important item in picture-making which will be discovered and corrected if you develop as you go along. Take, for comparison, a few perfect negatives. You may forget how a good thing looks.

Films can be purchased anywhere and everywhere in Europe. They are more plentiful there than here. When you are in London or Paris lay in a stock at the Kodak headquarters. You are sure to get the freshest there. Always look at the date and know that it is well ahead. Better not try other makes which will probably prove inferior.

If you do not take a developing machine then hold your films till you find a good dark room in a hotel. Many hotels have them, and so advertise. Developing films in one's chamber in a country where it is not dark till nine or ten o'clock is tiresome. Many a film has been spoiled on a washstand. The writer developed in dark rooms in hotels, at the dealers, and in his own room. When using hotel dark rooms he always took the films after washing and put them through glycerine in his own room and dried them on the inside of the wardrobe door. There is not much fun in waiting till ten o'clock and darkness in one's room and then working and washing two hours while one's wife wants to go to sleep after a hard day's work, or in getting to work in the dark room of a dealer who does not understand your language or you his, and then have the door banged by some new customer who talks a jargon that is as clear to you as yours to him. Moral, take a machine.

I would not advise much printing. If a few trial tests are to be made use Solio, but do not stop to tone them. Of course Eastman's Sepia paper is the simplest of all papers.

Do not blue print, or you will have no time to do anything else, and one does want to see a little of the country by daylight.

There is one golden maxim which we all need at home and abroad in taking pictures: "See how little, not how much, we can get in a picture." Study simplicity. Don't crowd in too much.

Buy postal cards of buildings, etc., and take street scenes and things you cannot buy, and you will have an illustrated diary of your journey that will remain a joy to you and your friends for years.

ANTICIPATION. Enlargement. Taken with a Cartridge Kodak. MRS. C. G. BULL.

BULL'S-EYE KODAK. MRS. HELEN W. COOKE.

# Photography as Applied to Illustration and Printing

[Abstract of Cantor Lecture delivered at the Society of Arts, London]

J. H. GEDDES

## PHOTOGRAVURE.

HISTORICALLY, photogravure, or heliogravure, is quite the earliest process of photomechanical printing rendered practical for the uses of illustration by the printing-press, and its history is full of interest for the student and experimentalist. We are, however, not concerned specially in matters historical this evening, and I am expected to explain to you only its principles, some methods, and just how the process stands to-day in its relation to modern illustration.

Photo-intaglio engraving, as its name implies, is just the opposite in effect to the photo-relief blocks which were described in the first lecture, The principles of working are, however, practically the same as for type blocks, the results being obtained by the employment of a photographic image in combination with bichromated gelatin. The lines or gradation of the picture are sunk below the general surface of the metal, and the inking of the picture, instead of being done by means of a roller, is effected by forcing the ink into the sunk lines with a dabber, the surface of the metal representing the subject is then wiped clean, and the impression is made by pressing a soft, sized paper in contact with the plate by heavy pressure; the pressure forces the paper into the inked lines or depressions forming the picture, and brings away the ink—the tones of the picture being represented by dark masses of ink in the deepest depressions, and by lighter gradations in the shallower portions, until the surface of the metal is reached, giving pure white.

Whilst photogravure justly stands at the head of all processes for artistic illustration, it is one which calls for more individual skill on the part of the engraver than almost any other. There is much uncertainty in the general results, and

"Sanguinaria, from whose brittle stem
The red drops fall like blood."

By L. B. Baynes.

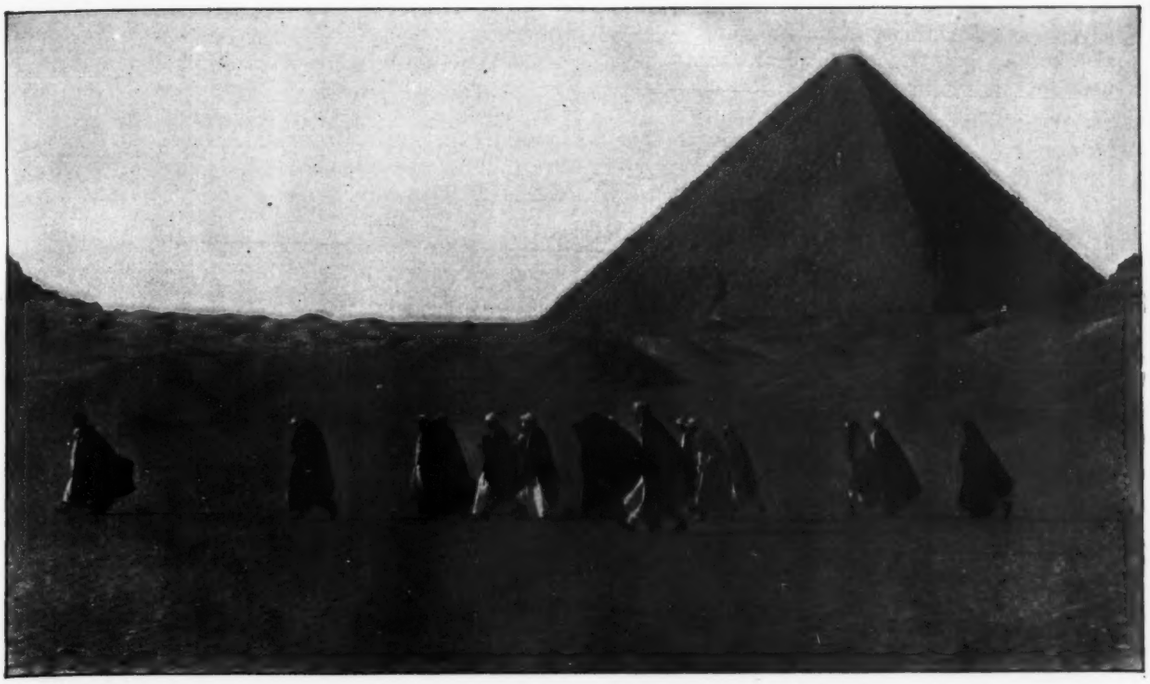
often more than one plate must be etched before a satisfactory effect is obtained, even then sometimes a good deal of help must be given to the plate by means of the burnisher, scraper, and graver, operations which remove the process from the mechanical, and call for higher artistic qualities than are generally essential for other processes.

The importance of the process renders it desirable that some demonstration of its working should be given, so that the uninitiated may better understand its principles, and I am glad to state I shall be enabled to show you some of the practical details this evening, through the kindness of Mr. Howard Farmer, who has sent Mr. Symmons equipped in order to render us this service. The various operations will be slower than my description, but if you will permit it, I propose to make a break in my paper at one or two intervals, to tell you the essential points as the experiment progresses.

There are several methods of preparing photogravure plates, notably Fox Talbot's process, invented just about fifty years ago, and which is to-day, in practice, the principal of the most modern process; Klic's process, a modification of Fox Talbot's; Woodbury's process, which is, I believe, adopted by the French house of Boussod, Valadon, and Co.; Waterhouse's process, in which an electrotype plate is prepared from a sand-grained, gelatin relief; Dr. Albert's process, and many others, only differing in slight details from the first-named.

The operations of preparing a photogravure plate by the process founded by Fox Talbot, are as follows: — The first requisite is a transparency or positive picture on glass of the subject which it is desired to engrave; the transparency may be made by the carbon process, or by any of the dry plate processes, but if the latter is used the transparency must be reversed. This positive on glass should be as perfect as possible, free from spots or defects, and full of detail. A piece of finely polished copper is next selected, and carefully cleaned with Tripoli powder and water until the surface is free from the slightest trace of grease; after drying, the plate is ready to receive a graining of powdered asphalt or resin, so that the photographic image, when etched into the plate, will have the necessary roughness or grain to hold the ink required for printing. The powdered asphalt is placed in a box with an arrangement for creating a cloud of asphalt dust within the box, depending on the kind of grain required, whether coarse, or medium, or fine. An interval of some minutes is allowed to elapse before opening a door in the side of the graining-box and placing the plate face upwards for the dust to fall upon it. Three minutes is generally sufficient to ensure that the copper surface is evenly coated with the grains of asphalt. The plate is then taken out and placed on a plate of sheet-iron under which is a Bunsen burner, or is held over a flame of gas, to melt the powder so that it adheres firmly to the copper. As soon as it is cold the copper is ready for the next operation, namely, to have the gelatin resist carrying the picture transferred to it. The gelatin resist is prepared by printing an image from the transparency already referred to on a piece of sensitized carbon tissue, which is a surface of gelatin (backed with paper) mixed with some pigment like oxide of iron or carbon, and sensitized with bichromate of ammonia. The printing is carried out in the same way as for an ordinary carbon print, save that the resulting image is negative instead of positive. The printed carbon paper is immersed in water for a few minutes, and is then squeegeed to the grained copper surface, and developed with warm water until all the unacted-upon gelatine is dissolved, leaving only the negative picture on the metal. This print forms the "resist" for the subsequent etching-in of the picture, and carries the whole of the gradations of tone of the picture. As soon as the print is dry (it can be dried either spontaneously, or, if the grain is asphalt, by the application of methylated spirit) the etching of the plate may be proceeded with, but it is an operation requiring some care and skill in order to secure perfect results. The etching solution is perchloride of iron, which should be pure and neutral; the strength of the solution is important. Generally speaking, three strengths of solution are required, the first, tested by Beaumé's hydrometer, should register 38 to 40 degrees, and only attack the deepest shadows of the plate. Four or five minutes' etching with this solution is usually sufficient; then a solution of 35 degrees replaces the first, and the etching will be extended to the middle or half-tones for another period of four or five minutes; the third strength of solution is next taken, and the etching will attack the lighter tones up to the high lights. As soon as this is apparent, the etching is complete, and the plate is plunged in water, and carefully washed, the resist and protection varnish removed, and the plate is ready for proofing in the press.

The graining of asphalt mentioned is commonly used for giving the etched surface a sufficient "bite" to hold the printing ink, but there are several other grains employed, notably, the mechanically ruled screen grain seen in half-tone blocks. This grain cannot be applied to the copper in the same way as resin or asphalt powder, but it can easily be added to the transparency used for printing the resist, or it can be printed on the carbon resist carrying the picture by giving it a short



AN ARAB FUNERAL. MISS C. PENDLETON.

Cartridge Kodak.

secondary exposure after the picture image has been printed. The advantage of the mechanical screen is that it gives a stronger grain to the plate, and admits of larger and more rapid printing. Photogravure plates of this kind deeply etched may be printed from at the rate of 500 or more per hour in a copperplate-printing machine. The Rembrandt intaglio process, which, by the way, is a secret one, employs a grain of this nature, and from my observation it gives softer and smoother results than ordinary photogravure, though it lacks the brilliancy and strength of the latter. I cannot tell you how the process of Rembrandt intaglio printing is carried out, but from experiments I have made in this direction I am inclined to the opinion that the plates are bent on to a cylinder of a machine similar to that used for printing wall-papers, and that an ink composed of dextrine or starch with a pigment replaces the usual greasy ink, also that a scraper or knife is used for "wiping" the plate, in the same way as in the old process of Docteur printing. I have some examples printed in this way which closely approach the Rembrandt.

### COLLOTYPE.

I have on the syllabus of subjects to be considered this evening, the processes of collotype and Woodbury-type printing; either of them would supply abundance of interesting material for an entire paper, but the limited time at our disposal will admit of my giving you little more than an outline of their principles and working. The collotype process is worked universally, and is know by a variety of names; the Germans call it "Lichtdruck," the French "Phototypie," the Americans "Phototype," and we English have given it the titles of "Photo-print," "Heliotype," "Autotype," "Photophane," "Photomezzo-type," "Graphotone," etc.

The process is based on the well-known action of light on bichromatized gelatin, and is allied to photo-lithography, with this difference that in collotype the exposed image in gelatin is employed for the actual printing surface, and not only can line subjects be printed from it but copies of photographs, paintings, and drawings. It renders half-tones so accurately that when prints

by collotype process are made on highly-glazed paper, with a suitable ink there is scarcely any preceptible difference between them and ordinary silver prints; platinotype and bromide prints can also be closely imitated. The process is largely used for the production of view books, facsimile copies of engravings, copies of paintings, "art study" portrait work, and for commercial illustrations. I have explained in a previous paper that when a film of bichromate mixed with gelatin is exposed to light under a negative, then washed and dried, it will, when treated like a lithographic stone, absorb water where the gelatin film was protected from light by the dense portions of the negative, and will take ink and form a printing surface in the places where light has obtained access to the film through the negative. A collotype plate will not only take ink where absolutely clear glass occurs in the negative, but it will take ink in the half-tone in exact gradations corresponding to the amount of light passing through the negative. This property is most valuable, and, as a matter of fact, constitutes the process.

The preparation of collotype plates is not difficult, and the operations can be described in a few minutes. The printing plate is formed of a piece of plate glass of about ½ in. in thickness, ground on the printing side to give a better hold to the gelatin. In order that the film may withstand the heavy pressure of the printing-press, it is found necessary to coat the plates first with a substance containing albumen, water-glass, and water. This solution is spread over the cleaned glass in a thin coating and dried. The sensitizing solution for collotype printing is composed of Coignet's gelatin 3oz., albumen 1oz., water 25oz., and bichromate potash ½ oz. The exact proportions are not arbitrary, and different operators modify their solution as experience guides. The sensitizing solution is carefully filtered through flannel, and, whilst warm, is poured over the surface of the "substratumed" glass plate in a fairly thick film; the coated plate is then placed on accurately leveled supports in a drying-chamber or box, and heat is applied to the bottom of the box, which is made of sheet iron. Considerable heat is required to dry the plates, and the grain or texture of the plate is affected by the speed of the drying; about four hours is the usual time occupied. When the plate is dry and cool, it is ready for exposure under the negative; the qualities necessary in a collotype negative are that it must be reversed, and be of full printing strength. A negative that would render a full rich print by any silver printing process is the proper standard for collotype. The margins of the negative are masked with thin opaque paper or tin-foil, so as to permit of the picture being printed with a clean edge on paper with proper margins. The time required for the exposure under ordinary conditions, as regards light, is from twenty minutes to half an hour, but this is a matter which only can be fixed by experience. The image on the plate cannot be examined during exposure, and an actinometer scale is used for gauging the amount of light. After exposure, the plate is taken into a room lighted a dull or yellow light, and washed in running water for about half an hour in order that all the soluble unacted-upon bichromate may be removed from the film, after which the plate is allowed to dry spontaneously, when it is ready for printing.

The printing may be performed in an ordinary Albion press used for letterpress printing, or in a lithographic press. For rapid printing, or for long runs, special steam-driven presses are constructed with cylinder pressure, on which it is possible to print two or three hundred copies per hour.

When the plate is fixed in position in the press, it is first wet all over with a sponge and water, or with a solution of common salt, glycerine, and water, which, after being allowed to act on the gelatin for ten or fifteen minutes, is sponged off and the plate is rolled up with ink. If the printing is being done on a hand press, a coating of ink is applied first with a leather roller, which inks up the shadows and stronger parts of the picture. This inking is then followed by another with a gelatin roller, which inks up the half-tones and details of the subject. A sheet of ordinary printing-paper is now placed over the inked surface, and pressure is applied. The result is a permanent ink print on paper of the negative used. If the printing is done on a steam press, the operations, are of course, more mechanical, but the finished result is practically the same. Large plates can be successfully dealt with at machine, and pictures on paper up to 40 in. by 30 in. can be printed.

The collotype process has had a long and successful career, and the beauty and delicacy of its results, when properly printed, are fully equal to that of any photo-mechanical process, but of late years the advances made in half-tone blocks, and more especially in the machinery constructed for printing them, has to some extent covered the ground hitherto occupied by collotype illustrations alone, and though the half-tone block can never oust or replace collotype for many kinds of illustration, yet it is sufficiently a rival to restrict its expansion and scope from a commercial point of view.

### *The Color Problem in a Nutshell*

Thomas Sparrow, the subject of this picture, was born a slave, in New Berne, N. C., May 28, 1826. His master was Amos Wade, who had a large machine shop in Wilmington, N. C. Thomas learned his trade and served five years, then went as engineer on the Charlottesville & Danville Railroad. At the breaking out of the war, when United States troops took New Berne, he ran away and became cook for General Foster. At the close of the war he came North and settled in Dedham, Mass. He had twelve brothers and thirteen sisters. He was the father of sixteen children, none of them now living. He has never used tobacco nor liquor in any form; is still well and does gardening for a living.

He had a good master. After he learned his trade he went where he liked, and paid his master a certain part of his wages. Thomas says if it had not been for the war he would not have to work now, as his master would have looked after him.

# Thoughts for the Thoughtful

You must look at pictures studiously, earnestly, honestly. It will take years before you come to a full appreciation of art; but when, at last, you have it, you will be possessed of one of the purest, loftiest, and most ennobling pleasures that the civilized world can offer you. — *J. C. van Dyke.*

Pictures, like people, have individual character and charm, and he gets most pleasure out of them who takes them for what they are, not criticizing them for their failure to be something else. — *Emery.*

Beauty, which is the natural food of a healthy imagination, should be sought after by every one who wishes to achieve the great end of existence — that is, to make the most of himself. — *Blackie.*

Simplicity is a great beauty in decoration. If the unit be cut up into many petty parts this beauty is lost.

> "Teach them the music fine
> In the curve of a perfect line."

Art is the love of certain balanced proportions and relations which the mind likes to discover and bring out in what it deals with, be it thought or the actions of men, or the influences of nature, or the material things in which necessity makes it to work. — *La Farge.*

WET PAVEMENTS. MR. WM. C. MOTTERAM.
Cartridge Kodak.

# Dr. Miethe's Three-Color Process

OF the attempts hitherto made to prepare photographs in natural colors, only those which are usually called indirect methods have led to useful results. These might also be called combination color processes, since in them the natural colors of the objects photographed are reproduced by the combination of several (as a rule three) monochromatic partial images. The color-analysis, that is, the separation of the natural colors into three portions by means of color-sensitive plates and suitable ray filters, is nearly identical in all the indirect methods, but they may be divided according to the method of color-synthesis which is used. In a part of them, the "additive methods," the three partial images are optically superimposed by the aid of light-filters which exactly correspond with those used for the

preparation of the respective negatives (*i. e.*, red + green = yellow; yellow + violet = white). These methods offer no practical difficulties, but they also give no actual image and therefore have little practical value. The other group of indirect methods, the "subtractive processes," subtract from white light (*i. e.*, white — green = purple — blue = red — red = black). These methods of indirect color photography may be practically carried out in different ways. One may use for the preparation of the three partial images colored transparent chrome-gelatin reliefs and unite these by superposition to a transparent composite image (here belong the processes of indirect photochromy of Lumiere and Selle, etc.), or one may print the three monochromatic partial images in the photo-mechanical way, one over another, on paper with fatty inks, on a suitable press. This three-color printing process has reached great practical significance, and is much used for illustration and advertising.

Prof. Adolf Miethe, of Charlottenburg, in Germany, has rendered great service to the development of indirect color-photography. He has succeeded in preparing a new coloring matter called ethyl red (a chinolinchinaldiniodalkyl), which makes the gelatin dry-plate nearly equally sensitive for all colors of the spectrum. A panchromatic dry-plate, sensitized according to Miethe's directions, is prepared by Otto Perutz, of Munich, and called the "Perchromo Plate." Also, by bathing an ordinary dry-plate in a very dilute solution (1 : 50,000) of this coloring matter one obtains a plate which is nearly equally sensitive for all spectral colors, and therefore suitable for three-color work, and which keeps a very long time when it is well washed after bathing. Further, Miethe has succeeded in preparing the necessary light-filters for the absorption of certain kinds of rays very exactly, for use with the panchromatic plate. These light-filters divide the spectrum into the three following inclusive zones: 400-490, 490-589, and 589-700 millionth-millimeters wave-length, respectively. The divisions lie very near the F and D-lines. The relative exposures with these filters and the above-mentioned panchromatic plates are two (blue), one (green), two and one half (red); in practice, it would probably be preferable to expose equally long with all three filters, and to

TABBY. By Charlotte Otis LeRoy.

weaken the stronger acting rays by the use of a correspondingly smaller stop. How considerable the sensitiveness of the new alkyl-red plates for green and red is, may be seen from the fact that it was possible to take a group of two persons on a light but sunless morning in September, at 10.30, with Voigtlander's Portrait Anastigmat, stop F:12.5, with exposures of one and one half seconds for blue, three fourths second for green, and one and three fourths seconds for red, the whole exposure being thus but four seconds. Under such circumstances it is now possible to reproduce not only landscapes, but also portraits of persons and groups by three-color printing processes or through the additive methods of indirect three-color photography. The coloring of pictures made by Dr. Miethe's process must be characterized as very pure and true to nature.

In the development of ethyl-red plates the ordinary red dark-room light cannot be used, since the plate is seriously affected by it. Miethe recommends the preparation of dark-room lantern panes from fixed gelatin plates, of which part are bathed in brilliant yellow, 10:300, and part in methyl violet, 1:100. After a brief washing and thorough drying two of these plates of different colors are laid face to face and bound together. If the pictures are to be used not for three-color printing, but for polychromatic projection, lantern slides are made as usual from the three negatives and used in a triple lantern provided with color filters which correspond with those used in the preparation of the negatives. With properly chosen colors, the three lights falling together upon the screen unite to form white. Each lantern slide gives a colored partial image, and as they exactly register upon the screen, a picture in natural colors is the result. In the great three-color projection apparatus recently installed in the Berlin Urania, under Dr. Miethe's direction, the three-color filters serve also as cooling cells to keep the condensers from cracking.

STEPS TO OLD MONASTERY, Sorrento, Italy. MISS JEANNIE EVANS.
Bull's-Eye Kodak

JONQUILS. By Arthur K. Wilmarth.

# Two Views

Written for the Photo Era

"Look!" said Brown, of the ruddy nose,
"At that man Jones in his camera clothes;
Starting out for a five-mile jaunt,
No wonder he's thin and long and gaunt."

"Look!" said Jones, of the healthy tan,
"Brown looks less and less like a man,
But more and more like a bock-beer sign.
Why don't he take up a sport like mine?"

—Lilian M. Ratcliffe.

# The Suppression of Alkalies in Development

IN a preceding issue we have given various formulæ for the use of acetone in lieu of alkalies in developing baths. MM. A. and L. Lumiere and Seyewetz, who introduced this new process of development, have recently published the results of new researches in the same direction, and found in the paraformaldehyde a substance which well deserves to retain our attention. Though it is

CLOISTERS, BOSTON PUBLIC LIBRARY.

WM. D. GRIER.

Taken at 3 P. M., cloudy light, Collinear Lens. Stop F : 22, five seconds' exposure, Orthonon plate.

insoluble in water, it dissolves readily in sodium sulphite, and this solution, which has none of the inconveniences of the alkalies, may be used in their place in all the developers which call for alkalies, and, moreover, it possesses the property of hardening and even insolubilizing the gelatine.

It has been found that an exceedingly small amount of this substance is needed For instance, with hydrochinon, where one hundred parts of alkali is required, only one part paraformaldehyde is sufficient to produce the same effect. In order to avoid the difficulty of weighing such a small amount of substance, the authors make use of a mixture of paraformaldehyde and anhydrous sodium sulphite, and have given the name of formosulphite to a mixture of 3 parts paraformaldehyde and 100 parts anhydrous sodium sulphite. A stock solution can be made by dissolving 28 grams of formosulphite in 100 cc. of water.

The best results have been obtained by developers of the following formulæ:

PYROGALLIC DEVELOPER.

| | |
|---|---|
| Water | 100 cc. |
| Formosulphite | 9 grms. |
| Pyrogallic Acid | 1 grm. |

HYDROCHINON DEVELOPER.

| | |
|---|---|
| Water | 100 cc. |
| Formosulphite | 9 grms. |
| Hydrochinon | 1 grm. |

METOL DEVELOPER.

| | |
|---|---|
| Water | 100 cc. |
| Formosulphite | 9 grms. |
| Metol | 1 grm. |

PARAMIDOPHENOL DEVELOPER.

| | |
|---|---|
| Water | 100 cc. |
| Formosulphite | 14 grms. |
| Paramidophenol | 1 grm. |

METOL-HYDROCHINON DEVELOPER.

| | |
|---|---|
| Water | 100 cc. |
| Formosulphite | 8 grms. |
| Metol | 0 grm., 5 |
| Hydrochinon | 1 grm. |

HYDRAMINE DEVELOPER.

| | |
|---|---|
| Water | 100 cc. |
| Formosulphite | 5 grms. |
| Hydramine | 0 grm., 5 |
| Potassium Bromide (10% solution) | 1 cc. |

ICONOGENE DEVELOPER.

| | |
|---|---|
| Water | 100 cc. |
| Formosulphite | 9 grms. |
| Iconogene | 1 grm., 5 |

PYROCATECHINE DEVELOPER.

| | |
|---|---|
| Water | 100 cc. |
| Formosulphite | 14 grms. |
| Pyrocatechine | 1 grm. |

As usual, potassium bromide may be added as restrainer to these developers, in case of overexposure. On the contrary, when the plate is underexposed, an extra addition of formosulphite acts in the same way as an excess of alkali.

As the solution of paraformaldehyde in sodium sulphite has the property of insolubilizing the gelatine, the authors have also tried to use it instead of alum in toning-fixing baths, but it has been found necessary to use only a very small quantity of sulphite, for too great an excess of that salt would alter the toning property of the bath. A mixture of 1 part paraformaldehyde, 10 parts anhydrous sodium sulphite, and 40 parts sodium chloride is best used for the purpose, 2 grams of the mixture taking the place of 10-15 grams alum; a 1 per cent solution insolubilizes in a few minutes the gelatine on papers, so that they can afterward be treated by boiling water, if desired.

In fixing bath for plates, paraformaldehyde can also take the place of alum, but an excess is to be avoided, for the contraction could be so great as to detach the gelatine from the glass.

DR. E. J.

NIGHT, FIFTH AVENUE, NEW YORK CITY. By ARTHUR HEWITT.

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# Some Schemes for Enlarging in the Camera

WILLIAM PERRY HOPKINS

LIKE to make enlargements, but haven't sufficient bellows-length, eh?

Well, lots of others have felt the same restriction. I've learned how to get around it, to some extent. What's more, I'll tell *you*.

Somewhere or other I've read that the first thing an amateur generally does is to buy a small camera and then wish he had bought a larger one. The same applies to bellows-length.

It seems a generally wise thing to do nowadays to purchase a view-camera (second hand will usually do) somewhat larger than, and in addition to, your regular camera. The increasing use of fine lenses makes it possible to use the 5 x 7 lens, for instance, in an 8 x 10 view-camera for wide angle work with a small stop.

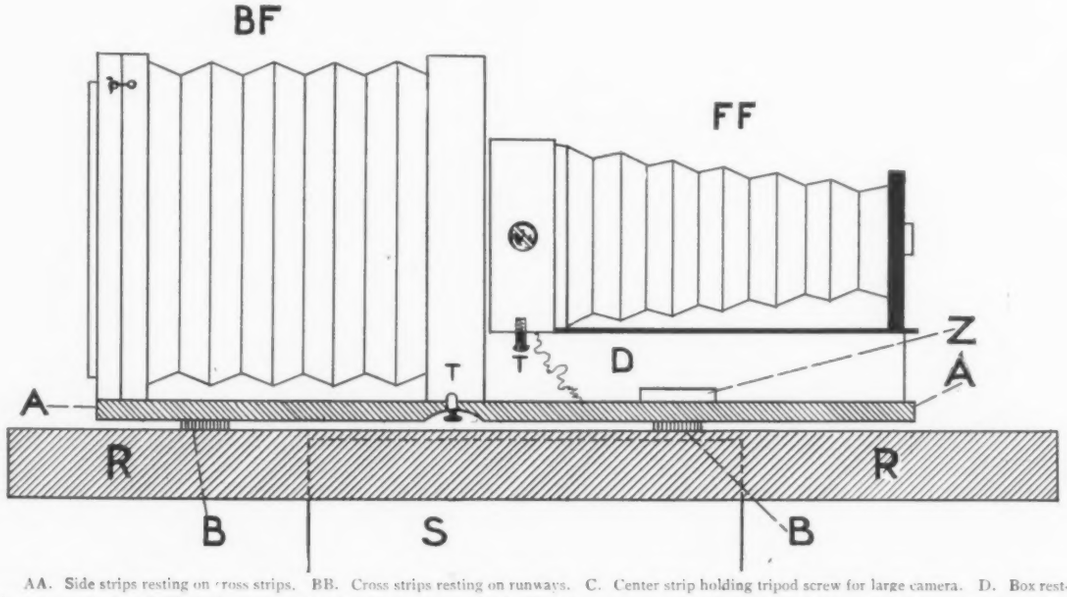
I assume you've got such a view-camera. If not, don't rush off and order a new one, unless you know of a "bargain." I got a very good second-hand Scovill & Adams view-camera in 8 x 10 for $8, with an 18-inch bellows. I've since seen rather less convenient models offered at $10, brand new, with a holder.

But I must return to the scheme. It is nothing more nor less than taking the front board out of the view-camera, and the ground glass and reversible back out of the other camera, and setting the two together. Then, when you've racked out the bellows in front of the hand-camera and out behind the view-camera — there you have your focal length. No need to buy a camera which you can use only for enlargements. Keep your money for something else, and still have two cameras for various uses.

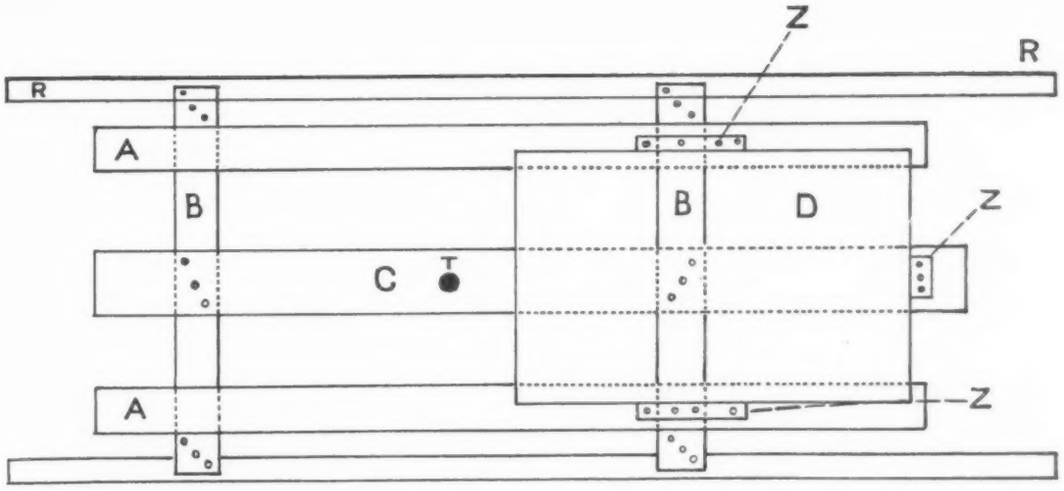
Let me fall back on personal experience, and tell you how I manage.

My hand-camera is a 5 x 7 Premo, with about 20-inch bellows-length; with my 8 x 10 view-camera of 18-inch bellows I get a total of about 37 inches. I got a light-weight box at the grocer's (about a yard high and half a yard square), to the top of which, standing on end, I nailed two pieces of wainscoting about four feet long, projecting half an inch above the top. This serves as an almost frictionless runway.

Then I took some strips of wainscot and built (very roughly, for I'm no carpenter) a frame which would set across the runway like a letter H turned on its side.




AA. Side strips resting on cross strips. BB. Cross strips resting on runways. C. Center strip holding tripod screw for large camera. D. Box resting on center strip to hold small camera. FF. Front focus camera. BF. Back focus camera. R. Runway nailed to top edge of box. S. Supporting box. TT. Tripods in position to hold camera. Z. Zinc strip to hold box to side strips.




Two cross pieces, BB, make it square and staunch. A center-piece strip, C, runs out in front some six inches farther than the side pieces, AA.

The two cameras (each with bellows extended) are set upon the frame so made, and position of the tripod plates is marked. Then the strip C is bored with a gimlet (or burnt with a hot wire or nail) to let the tripod screw go through. If the wood is too thick, chop out a bit from the bottom with a chisel — never mind if it *does* look rough. Then set the view-camera on the strip, and make it fast with the tripod screw. Find a light box rather long and narrow — say, twelve inches wide and twenty inches long — and high enough to hold the hand-camera so the center of the lens is opposite the center of the ground glass on the view-camera. (Cut it down if it's too high.) You can guess at it within a quarter inch, and that's near enough for most purposes. But rule it exactly, if you wish. This narrow box should rest, bottom side up, on the front of strip C, thus giving a firm support to the smaller camera when the bellows is racked out.

To fasten the narrow box to the strip C a couple of pieces of tin or zinc are pierced with holes and nailed to the strip and the box sides, after first having cut out a place from the end of the box which is to be to the rear. (This hole is to permit the hand to be inserted to tighten the tripod screw under the smaller camera).

A third piece of tin will prevent the long box rocking about if fastened to the front end of the box and the strip C.

There's nothing more to be done now, save to put a piece of black cloth around (or some thick felt *between*) the two cameras to keep out the light. Afterward you can go ahead, just as though it were all a single camera.

The idea of making a runway on the box-top in the first place is not *necessary*, but it avoids moving the box itself backward and forward to regulate the distance from lens to negative.

As a rule one can be sure of the parallelism of negative and paper by measuring, but if you're inclined to do more carpenter work than I did you can either groove the side pieces AA or nail a second strip outside them. If you think you can guess the distance and parallelism with your eye you need not put such side-strips on the carrying-frame at all. The ends of the cross strips BB will answer as bearing on the runway.

With the outfit mentioned and a lens of eight and one half inches focus I can get an enlargement on my view-camera ground glass of a little over three diameters; that is, a tree which appears to be two inches high and one inch broad on my negative will appear six inches high and three inches wide on the ground glass. A small head in a group on a four by five will come out about cabinet size.

Of course, if you have an extremely long-focus camera to start with — say thirty-two or thirty-three inches on the 5 x 7 size — you may get nearly five times enlargements; and if your view camera is a long-focus also — of say twenty-seven or twenty-eight inches — a bit over six diameters may be obtained.

As to the frame for the bromide paper, you say? I was just coming to that.

Mine is the simplest scheme imaginable — *don't use any!*

Instead, clean off an old negative which is worthless and lay it in the plate-holder, and use it same as you would a plate, with the sheet of paper just behind it. It works splendidly, provided you have the thickness of the clear glass equal or nearly equal to the thickness of the ground glass on which you focus.

It's a good idea to rule lines with lead (or slate) pencil on the roughened side of the ground glass. Two diagonal lines from corner to corner will give the center of the glass, and a vertical and horizontal line crossing at the center will give a ready method of squaring the view, in case the negative is not straight, caused by camera not being level at exposure. That makes all the lines you really *need*, but it's mighty convenient to have lines of each plate size up to the size of the ground glass. I have lines ruled for 3¼ x 4¼, 4 x 5, 5 x 7, and 6½ x 8½ on my 8 x 10 glass.

I know you will have understood, ere this, that I don't exactly "hanker" after needless fussing. For that reason you may be interested to know how I hold the negative during exposure.

A frame of four pieces of wainscoting, with half the "groove" cut away, makes a simple holder. It should be equal in size to the view-camera ground glass. To use smaller negatives nothing is handier or cheaper than the inside kits which, beside being light and accurate in size, are fitted with "buttons" to hold smaller ones in place. These buttons on the large frame can be made of a bit of sheet iron or brass, pierced with a hole in the center and attached by a screw, which can be afterward tightened, if necessary, as a nail can not. A piece one fourth inch wide and three fourths inch long is ample to hold an 8 x 10 glass. One at top and another at bottom may be used, or one at or near each corner — whichever way seems preferable.

If you like "neat-looking" affairs you can rig a second frame outside the one which holds the negative and put a piece of ground glass in it, but a sheet or so of tissue may be pasted over, and will do quite as well.

It is well to remember that copying by this method is analogous to photographing *against* the light, and direct sunlight must not strike the *lens* during the exposure. It is a good idea to cover the space from negative to lens by a light-weight, black cloth hood extending from the frame edges and fastened around the front board by a rubber band or tape. You'll notice I say it's a good idea. But I admit I don't practice it. If the sun strikes the lens when I get ready to work I pin a big sheet of ledger paper to the top of the window-sash, so it screens the lens while permitting the light free access from negative to lens. Still, the other way is undeniably *best*. Some day, when I can spare time, I'll fix up mine that way.

I don't know that I'm possessed of any strikingly original notions about enlarging on bromide paper, save that I use more of the gaslight papers than the dark-room ones. On Velox or Vinco, or Rotox or Vinco the process isn't difficult — in daylight. Exposure would be too long by artificial light.

As one second is generally enough for copying full size on Eastman paper in sunlight, I estimate Special Velox at twelve times slower, and Regular Velox four times slower than the special. Rotox (gaslight) paper is said by its makers to be 100 times slower than Rotograph (dark-room) paper. Portrait Cyko is ten times faster than Carbon Cyko. With these notes, it is simple to gauge exposure with a test-slip.

Test-slips for enlargements should be long enough to cover quite a distance of the *length* of the negative, but need be only about a quarter-inch in width. Exposure is tested by withdrawing the slide, say one quarter the length, and exposing for maybe one minute. Then draw it about half an inch farther and give it three minutes there; another half-inch withdrawal follows with another three minutes, and this process is repeated till the slide is nearly or quite out. Then replace it, and carry the holder to the room for development, away from daylight — though gas or kerosene is safe. Having kept track of the different exposures, you will know how much each portion of the paper received; respectively, one, four, seven, ten, and so on, minutes. It will be easy to judge which exposure was correct, or nearest correct, after development in the usual manner, and a second test-slip will seldom be required.

If a sheet of orange glass is placed back of the negative to be enlarged from, it will add two to four times the exposure, depending on the shade of color in the glass. A sheet of blue glass similarly used will add very little to the exposure — perhaps a quarter, and will help out thin negatives considerably. All these figures assume sunlight or very bright daylight. I have made a 2 x 3 enlargement on Special Velox in four minutes from a thin negative backed with ground glass — other negatives have taken twenty minutes on the same day.

A DREAM OF FAIRYLAND. By Dr. F. Detleefsen.

It is general to recommend some particular developer for one's enlargements other than which the rest are worthless or almost worthless.

I haven't found it that way. I generally use what I happen to have on hand — and I do not complain at the results.

Different developers, however, give a different tone. That is certain. The M-Q of the Velox people gives a delightful "coal-black," when used with *just* the right amount of bromide; Tolidol gives nearest to the "engraver's black" I have yet found; Edinol gives a rather warm-black of specially pleasing tone — and has a decided advantage (to my mind) in that the same solution may be used for either plates or paper — *or first one and then the other*. The Edinol formula referred to is the one for snap shots and will be furnished on application to the Edinol people (Bayer). Rodinel, while rather less acquainted with me, has given general satisfaction and pleasing tones. It keeps well; but then, so do most any of the others, if stored in bottles well corked and filled to the neck.

Nor have I found any particular make of fixing-bath necessarily better than the rest. The Velox acid-hypo is plenty good enough for me, though plain hypo with acetonesulphite is all right. If you want to be certain of stopping development quickly when once it reaches the proper point, Carbutt's "short-stop" formula for Vinco is excellent. Perhaps it's superfluous to say so, but it pays to dip a print in water and give it a rinse between the developer and the fixing-bath. It makes the fixing-bath last much longer, and saves many spotted prints.

And — well, I guess that's all!

# A New Lens

SINCE the discovery of the new Jena Glass enabled the optician to produce new lenses where astigmatism was corrected to a remarkable degree, every energy of the lens-maker has been directed toward producing not only the most perfect results, but also toward reducing the cost of production, always very high in anastigmatic lenses.

A great advance in that direction was realized when it became possible to suppress some of the segments which had been thought necessary to the anastigmatic system. If we reflect but a moment that leading anastigmats have been usually formed of two lenses, each composed again of four thin lenses cemented together, it will be seen that a great economy of expensive material and workmanship would be realized could one but reduce the number of the component parts of each lens. Although this was tried, the results were not altogether satisfactory and could hardly compare with those obtained by the best cemented lenses of the older type.

It has been the privilege of Ross, Ltd. (London), to produce a lens simpler in its component parts than any other first-class anastigmat heretofore on the market, and yet possessing not only the beautiful qualities which distinguished the latter, but having still new features and qualities of its own. The HOMOCENTRIC Lenses, just announced, are composed of but four single segments, forming two lenses in all, against the six or eight segments that usually go to form the two lenses of the regular anastigmat. Yet the definition is just as exquisite, as perfect; the crispness rather superior. The corrections for astigmatism are equal to any, and the secondary aberrations, called technically, "spherical zones," which must not be taken for astigmatism, and which are present in nearly all modern anastigmats, are here avoided altogether, and so perfectly corrected that the resulting image shows a brilliancy and purity rarely met, if at all, in other lenses. It should be added also that the luminosity of these lenses is somewhat brighter than usual, as there are less reflecting surfaces and layers of glass than in the older cemented lenses.

Another and very important advantage of the HOMOCENTRIC lies in the low price. Compared with a lens of similar quality and speed of the cemented type, the difference is often striking. This difference in price is not only accountable to the lesser quantity of costly material, and incidentally decreased cost of labor (four segments instead of eight) that enters into its construction, but also to the fact that it is possible to obtain with uncemented lenses a greater circle of even illumination and definition, consequently offering a wider angle and a greater covering power, which allows us to use a lens of shorter focus to cover the same size plate.

The depth of focus in the HOMOCENTRIC is absolutely remarkable, and thanks to its admirable correction from every defect known in lenses and which it would take too long to mention here, one is able to focus at full aperture on the object, and set afterwards confidently the diaphragm to the stop with which he desires to take the picture, and *without refocussing*. In most modern anastigmats this is impossible, and Zeiss, in their catalogue, specifically gives the advice to focus always with the same stop one is intending to use, lest there be a marked loss of definition by stopping down the diaphragm. If it is reflected, that in many a dark place like interiors, churches, small alleys, confined situations, the light is so weak that it is well-nigh impossible to focus with a small aperture, it will be readily seen what a boon and a blessing the HOMOCENTRIC Lens will be in these cases, when it is only necessary for the operator to focus comfortably with the largest aperture and reduce the stops afterward with a certainty that the most perfect definition will be obtained.

HOMOCENTRIC and all other Ross Lenses are sold by all dealers in this country, the Rochester Optical & Camera Company being the trade representative of the manufacturers.

# Foreign Abstracts

***Photography of Opaque Objects*** Mr. Frederick Noad Clark continues in *Knowledge* his valuable notes on the photography of opaque objects. "Perhaps the most useful all-round objective for this work," he says, "is the 2-inch; a lower power than this we have found of no advantage when depth of focus is an object. The use of a stop in the form of an iris diaphragm or a Davis shutter is sometimes necessary, it being fitted just above the objective. This will increase the depth of focus when photographing spherical objects or those lying in different planes; but the exposure is necessarily prolonged. A plate giving the maximum amount of density is necessary. For this purpose any of the well-known makes of isochromatics are best. They must invariably be 'backed.' The developer should be dilute, and if pyro-soda be used (which we recommend) the pyro should be used sparingly. Development ought to be slowly carried on to full density, the aim being to obtain a negative with plenty of contrast, without blocking of the high lights. It is to give this effect that the backed plate is so essential. As to length of exposure no exact information can be given. As a rough guide it has been found that using a 2-inch objective with direct illumination by means of the bull's-eye from a good paraffin lamp with a 1-inch wick, the exposure at 20 diameters will vary from two to three minutes according to the color of the object; a white object naturally requiring a less exposure than a darkly colored one. As further examples we may mention those of Foraminifera at 8 diameters with a 2-inch requiring 30 seconds' exposure, whilst Polycistina at 45 diameters and a 1-inch objective required 30 minutes. The eggs of insects, particularly those of Lepidoptera, lend themselves admirably to photography. Especially suitable are those of the Lycænidæ, or blue butterflies, their small size and elaborate structure rendering them most beautiful objects for opaque photography."

***More on Chemical Sensitizers*** Luppo-Cramer has continued his researches on sensitizers, and states that most bodies capable of absorbing bromine, in contradiction to Vogel's theory, considerably diminish sensitiveness, and never increase it. The investigation further revealed the important fact that the theory is not false in itself, but that it has no application to the existence of the latent image, because the separation of halogen in this process is not only incidental, but apparently actually detrimental. The substances investigated (solutions of silver nitrate, sodium nitrite, sodium sulphite, ammonia, ferrous sulphate, hydrochinon, metol, pyrogallol, potassium ferrocyanide, tannin) act as sensitizers in the direct blackening of silver bromide in the light, because they combine with the bromine set free by long exposure, and apparently thereby hinder the reversal of the process and allow more silver bromide to be decomposed. Since these "sensitizers considerably diminish the sensitiveness in the production of the normal latent image, this proves that in short exposures the bromine separation has no effect in inducing the developability of the silver bromide. A practical experiment in which half of a dry plate was wet with water and the other half with four per cent sodium nitrite solution, after which the whole was exposed to the stage of reversal in a camera, showed that the bromine separation helped along by the nitrite not only did not hasten the formation of the latent image or the reversal, but slowed the first process and completely prevented the solarization. This adds new confirmation to his former researches, already abstracted in our last number. (Phot. Corr., 1903, 40: 25).

***Amidoacetates in Reducers*** The much-used Farmer's reducer has the disadvantage of keeping only a short time, since the ferricyanide is quickly reduced by the hypo to the inactive ferrocyanide. Homolka has now found that a completely equivalent but permanent reducer may be made by replacing the hypo by an alkaline salt of amidoacetic acid, which, although completely unaffected by the oxidizing action of the ferricyanide, abundantly dissolves silver oxide. In practice 5 g of potassium ferricyanide are added to 100 c of a 20 per cent solution of sodium amidoacetate, commercially known as "Pinakolsalz-N." The solution keeps indefinitely in dark-colored bottles, and is mixed with five to ten parts of water for use. The reduction proceeds rapidly, the plate becoming covered with a violet-green fog. After rinsing with water, the plate is laid in an acid fixing-bath, in which it immediately becomes clear and brownish black. The solution can be used repeatedly until exhausted. (Phot. Corr., 1903, 40: 19).

# Foreign Abstracts

***The Latent Image and the Photobromide Reaction*** After the analogy of his experiments with solarized silver bromide films, Luppo-Cramer has applied the photobromide reaction to the normally lighted latent image, and has succeeded in finding a reaction which destroys the normal latent image but leaves intact the small quantity of "photobromide" or "subbromide" which is formed during the exposure, so that it can be physically developed after fixing. This fact is of great significance for the theory of the latent image. Collodion plates which had all received the same exposure were partly treated with strong nitric acid, partly fixed, and partly treated with acid and then fixed. On treating these plates with a physical developer it appeared that the image was completely destroyed on the plate which had been treated with nitric acid alone, while on the plate treated with nitric acid and then fixed there was still a definite image, but much weaker than on the plate which was merely fixed. The nitric acid had therefore completely destroyed the developability of the normal latent image, although an undestroyed silver compound still remained, a chemically changed "germ" substance, which was not able to induce the development of the silver bromide changed by the nitric acid. If this substance is identical with the photobromide of solarization and differs from it only in quantity, cannot be asserted with certainty. This observation also hints strongly that the whole chemical change is merely accessory in the development process, or that at least another process plays a part beside the chemical one. Numerous repetitions of the experiment showed that the physical development of the normal latent image before fixing gives incomparably stronger images than the same treatment after fixing, i. e., that normal physical developability begins before the chemical change (bromine separation) occurs. Physical development therefore appears to be something more than the deposition of nascent silver on the "germs." One must, to explain the latent image, even if the separation of bromine can scarcely be considered as wholly without influence, at the same time assume a change of molecular structure. (Phot. Corr., 1902, 39: 696).

***On the Theory of Sensitizers*** H. W. Vogel's theory of chemical sensitizers, which assumes that absorbers of halogens increase the light-sensitiveness of silver halides because they absorb the halogen set free at the moment of exposure, and thus increase the tendency to react and prevent the reversal of the reaction, is, according to new researches by Luppo-Cramer, not to be wholly accepted. On testing the action of ammonia (sp. gr. 0.91) as a supposed sensitizer of dry plates, before, during, and after the exposure, it appeared, quite contrary to this theory, that ammonia used during the exposure considerably lessens the sensitiveness, while applied before the exposure it has no effect. This effect is stronger with collodion emulsions. One per cent sodium carbonate solution, and still more ten per cent potassium carbonate, increase the sensitiveness by presence during exposure, but this is also the case when the alkali is completely washed out again before exposure. An acid solution of silver nitrate increases the sensitiveness more when it is washed out before exposure than when it is allowed to remain. One per cent hydrochinon solution decreases the sensitiveness, but has no effect when washed out before exposure. That the alkaline carbonates increase the sensitiveness somewhat more when they are present during exposure, than when they are previously removed, need not be explained by their absorption of bromine, since many reactions go faster in the presence of alkalies. (Phot. Corr., 1902, 39: 699).

***Trioxymethylen Toning-bath*** The Lumieres and Seyewetz have shown that trioxymethylen with sodium sulphite can advantageously replace free alkalies or carbonates in the preparation of different phenol developers. The advantages which the mixture of trioxymethylen and sodium sulphite has over alum for toning-baths, are as follows: 1. The mixture reacts alkaline and does not decompose hypo, as acid baths do. Added to the toning-bath, it does not precipitate sulphur. Such baths can be prepared cold, while alum baths must be heated to precipitate sulphur in a filterable form. 2. The combined bath remains clear indefinitely, while the alum bath precipitates constantly. 3. Toned prints treated with alum to render the gelatin insoluble, may have sulphur precipitated internally by decomposition of hypo. Trioxymethylen hardens the gelatin without this danger. 4. It is known that the acid reaction of the alum which remains in the film is dangerous, if every trace of hypo is not carefully removed. As trioxymethylen is alkaline, this danger is less to be feared. (Rev gen. chim. pure appl. 1903, 6: 11).

# The Crucible

CRUCIBLE CATATYPY

Ostwald and Gros have lately worked out a new copying process for photographers, which gives positive prints from a negative by simple contact, without the influence of light. Catalysis, on which this process depends, is defined by Ostwald as a process by which a possible reaction is accelerated by the presence of a body, the catalyser, which itself remains intact. Great numbers of catalytic reactions are known, of which the following may serve as examples: When cold, dilute acids act on zinc, hydrogen is evolved relatively slowly, but on the addition of a drop of platinum chloride solution, the action becomes tumultuous, the platinum solution acting as a catalyzer. Another reaction is as follows: If an oxidizer, as potassium bromate, is added to pyrogallol solution, the mixture slowly turns brown, but this change becomes very rapid if a few drops of copper chloride solution are added. According to Ostwald there is no reaction which may not be catalytically hastened, and no substance which may not catalytically influence some reaction. For catatypy the most important catalysers are silver and platinum, because these substances in a state of fine subdivision usually form the basis of the photographic image which is to be reproduced. Among some practical details given by the Chemiker-Zeitung, we find the following: If paper coated with the above-mentioned mixture of pyrogallol and potassium bromate is brought into close contact with a platinum print, on the places where the paper is immediately in contact with the metallic platinum, the reaction between the pyrogallol and the oxidizer is so accelerated that a red-brown positive copy of the print is made in from forty five to sixty minutes. This process is not practical, for by repeated use, the platinum print gets a coating of coloring matter and becomes catalytically useless. Hydrogen dioxide, whose solution is strongly catalysed by platinum or silver, is practically very useful. The reaction, which consists in the evolution of oxygen is violently accelerated by these metals.

If, therefore, a photographic silver or platinum image is coated with an aqueous, or better, ethereal solution of hydrogen peroxide, the ether evaporates very quickly, and the platinum or silver catalyses the dioxide. Thus pure water exists on the image, while the blank spaces are covered with unchanged hydrogen peroxide. On a negative there lies an invisible positive. By simple contact with a prepared gelatinized paper this is transferred, and may be developed by the help of different solutions which are oxidized by hydrogen peroxide, and from which metallic oxides are precipitated. For example, such a developer may be an alkaline solution of manganous chloride or sulphate, which gives a brown image of manganese dioxide, an alkaline silver solution, which gives a black image of metallic silver, or an alkaline lead solution, which gives a brown image of lead dioxide. If the gelatin paper with its dioxide image is treated with a ferrous solution, iron vitriol or ferrous ammonium sulphate, there appears a weak yellow image of basic ferric salts, which by treatment with gallic acid is transformed into a violet ink print.

Another application of hydrogen peroxide for catatypic picture production is the following: Potassium permanganate solution spread upon paper is reduced to manganese dioxide. The brown surface catalyses peroxide. If this surface is drawn on with an oxalic acid solution, the manganese dioxide is destroyed, and a drawing with white lines results. Peroxide solution spread upon this paper is destroyed except on the white lines; this image can be transferred to other paper by contact and developed as above.

A more practical application of catatypy for photographers is its use in carbon or gum printing. Silver and platinum papers suitable for weak or artificial light are easily prepared and much used, but pigment and gum prints require strong light, owing to their relatively unsensitive properties. The catatypic process is as follows: An ordinary photographic negative (necessarily not varnished) is flowed with ethereal hydrogen peroxide solution and after evaporation of the ether, brought into contact in a printing-frame with unsensitized carbon tissue or gum-pigment paper. Thirty seconds' contact is sufficient, and a positive image is formed. The image is developed with ferrous salt, the ferric salt formed tans the colloid, and the picture can be immediately developed with warm water. The necessary time to this stage is about two minutes.

SELF-DEVELOPING PLATES

In a recent issue of the "Bulletin Belge," Dr. R. A. Reiss treats of the subject of emulsions containing developing agents with considerable detail. He refers to the experiments made in this direction by Petzhold, who added hydroquinone and sodium bisulphite to the emulsion. Still, he points out that certain inconveniences attend the use of plates prepared with this emulsion. Dr. Reiss has endeavored to perfect a process of this kind, and in the course of his experiments has found that nearly all the usual developing agents may be incorporated with the emulsion, provided that a preservative agent is present. After exposure, a simple bath of carbonated or caustic alkali serves for development. It must, however, be remarked that the results are very different with the various developers, and the keeping qualities of the plates are by no means uniform. Hydroquinone proved the most satisfactory developing agent to use, and acetonesulphite answered best as a preservative agent. In order to prepare such plates, a solution was made up as follows: Distilled and boiled water, 100 parts; hydroquinone, 1 part; acetonesulphite, 10 parts; ordinary plates are soaked for two minutes in this solution, and are then allowed to dry. Exposure must be about double that which would have been given to the untreated plate, and a simple solution of potassium carbonate of 3.3 per cent strength is used for development. There is a tendency to clearness in the transparent parts and vigor in the deposits which makes the treated plates excellent for reproduction and in making negatives for photo-mechanical processes. The grain of the resulting negatives is said to be extremely fine, and to resemble that of a collodion plate. Normal sensitiveness is obtained by reducing the amount of the acetonesulphite to half, but the plates so treated do not keep well and do not possess the exceptionally fine grain mentioned above.

A patent was recently granted in Germany for automatic developing plates. They were made by soaking the ordinary brand in a solution containing 100 parts of water, 10 parts edinol, and 10 parts acetonesulphite. Plates immersed in this solution and dried may be developed after exposure by simply immersing in a 25 per cent solution of potassium carbonate.

# The Round Robin Guild

Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in his name and address)

The Historic Picture Guild is an established fact. Since the publication, in the February PHOTO ERA, of the proposed plans, letters have been received from nearly every State, expressing interest in the work, and offering generous assistance in making it a success.

It is a scientific fact that large bodies move slowly, and as The Historic Picture Guild promises to be an extremely large body, its movements, at first, will be slow. The circulars, setting forth in detail the plans of the work, will be ready for distribution this month.

However, our Guild members need not delay the work of making negatives, — this month being especially good for certain subjects for the camera, subjects which later in the season may be concealed by too heavy foliage. The only restriction in making a negative is that no print under 4 x 5 will be included in the collection. Larger prints are preferred, and these can be obtained by making, or by having made, enlargements from small negatives, provided that such negatives are sharp and full of detail. These pictures must all be well focused and well taken, as it is the facsimile of the historic locality which is desired rather than an attempt at a pretty picture.

So, members of The Historic Guild, look up your intended subjects, and if April seems to be the best month to photograph them, — then photograph them in April.

April, with its "charming motleys, half light, half shade," is the ideal month for securing those "atmospheric effects" about which we hear so much and see so little. Poets see these mists and hazes, and write about them. Photographers may see them, but they forget to photograph them.

How aptly Lowell describes the effect produced by the springing oak leaves:

"The swellin' buds of oak
Dim the fur hillside with a purplish smoke,"

says the observing Hosea, and if an equally observing photographer should be clever enough to seize just that time when the "purplish smoke" is at its best, he would secure the hazy, smoky look in his photograph.

If one lives in a willow locality, let him try photographing a group of pussy-willows when the catkins are in blossom, and see what a beautiful result their gray-green will produce in his photograph.

The "misty, moisty mornings" of April open up delightful possibilities in the way of atmospheric effects, — possibilities which cannot be realized at any other time of year.

So, when April buds are swelling, and April mists are rising, and April clouds are flying, put on your waterproof garments, and go forth with your camera, confident that your quest for atmospheric effects will be well rewarded.

An April storm will prove an interesting subject for a series of progressive pictures. As you know, an April storm comes up quickly, and is over almost as quickly. The sparse foliage on the trees does not obstruct the view, and with quick plates and the ability to handle the camera skilfully, the swiftly rising clouds may be photographed in all their changes. The success of these pictures depends entirely on the skill with which the amateur manipulates his camera.

Have you ever read that clever book called "The Philosophy of Unconscious Cerebration"? The author, who is a German, has evidently studied well the unconscious work of the brain, and asserts that no action can be done well that is not done unconsciously. At first this seems too broad a statement, but when we put his theory to the test, we find that he is quite right. For example, observe a beginner in instrumental music. It requires so much thought to fit the proper notes to the proper keys that both tune and time go by default. But, listen to the musician who has become master of his instrument, — does he pay attention to the keys or to the strings? Certainly not. The instrument, to him, is simply a means of expressing his own musical thoughts, or the thoughts of some master musician. So well trained is he in the use of the instrument that he manipulates it unconscious of technical detail, his whole mind being given to the finished production of the music. Does not the master of the instrument use it through "unconscious cerebration"?

Take another case: The trained sportsman uses his gun through unconscious cerebration. He has practised so well the different movements required to fire the gun, that when he sights his game his mind is not distracted from securing his prey by any thought of the management of his weapon.

Not until the amateur photographer is sufficient master of his camera to use it by "unconscious cerebration" will he be able to make successful snap-shots, or, indeed, will he be sure of making a success of any picture.

So expert in the use of a camera should one become that his whole mind can be concentrated on his subject, and only unconscious thought go into his camera. To drill himself thoroughly in the use of the camera is one of the best things for a beginner to do, until such time in which he can use it without having to direct special thought to it; for, unless he learns to use it in this way, he will not be able to take advantage of photographic situations which require instantaneous action.

In drilling with a camera, the different movements always should be made in the same order. These should be determined upon, and not changed. The following order will be found to comprise the usual movements necessary in both plate and film cameras:

PLATE CAMERA

1. Adjust diaphragm.
2. Focus the distance by scale.
3. Remove plate-holder slide.
4. Set the shutter.
5. Locate object in the finder.
6. Press button to release shutter.
7. Place slide again in holder.

FILM CAMERA

1. Adjust diaphragm.
2. Focus for distance.
3. Set the shutter.
4. Locate object in the finder.
5. Press the release button of shutter.
6. Turn reel for next exposure.

A few words in regard to the different movements may be of service to the beginner, and may not come amiss to the more advanced amateur.

It will be noticed that the first movement designated is the adjustment of the diaphragm. This is one of the most important points in the use of a camera, and one should know always what size stop he is using. For a rather bright morning, use the largest stop. At midday, use a small stop. Suggestions on the proper stops to use on certain occasions have been given in a recent number, so we shall not repeat them here.

The next movement suggested is the focusing of the distance. In snap-shot work there is no way of focusing, except by turning the screw of the focusing scale until it marks the approximate distance of the amateur from the object to be photographed. The guessing or judging of the distance is something that can be learned only by practice. Estimate a certain distance; then pace it off, and see how nearly right you were in your estimate. A "pace" is the measure from the heel of one foot to the toe of the other, as the person strides forward. This measure is calculated to be a yard, or three feet; so, three paces would be three yards, or nine feet. It may require some practice before one can make accurate estimates, but when the eye is once trained, it remains trained.

To mention the removal of the plate-holder slide may seem superfluous, but this is something that is often forgotten; so when drilling, use an empty plate-holder, and remove the slide at the proper time.

The setting of the shutter comes next, and then the camera is ready for the exposure.

The next movement is to locate the object in the finder. If the object be a moving one,— the word "moving" here implying motion, and not emotion,— turn the camera until the object is in the proper place on the plate, and press the release button. This is the sixth movement. After the exposure, the slide is replaced, and another plate adjusted for the next picture.

In the Film Camera drill, do not neglect to turn on the reel as soon as the exposure is made.

It will be noticed, perhaps, that in this drill nothing was said about the bulb shutter. This is the reason: When one is out making snap-shot work, the bulb and rubber tubing are in the way, so I always advise the amateur to take them off, and to use the release button instead. If one prefers to make use of the bulb then in the drill, substitute "Bulb pressure" for button release.

To the amateur who will profit by these hints, and will learn to use his camera by "unconscious cerebration," the assurance is given that he will have the pleasure of producing very creditable work.

Do you want to try a developer that will do almost anything except to produce a picture on an unexposed plate? Then let me recommend Metol-potash. One can obtain more "kinds" of negatives with this developer than with any other known combination. It is a chemical concoction to juggle with, to experiment with, and to surprise one's self with. The active ingredients are metol and carbonate of potash. The metol solution is made up of 16 ounces of water, 1 1-2 ounces sulphite of soda crystals, and 70 grains of metol. The potash solution is made up of 3-4 of an ounce of carbonate of potash dissolved in 8 ounces of water. To use for ordinary negative, take 3 ounces of the metol solution to 1 ounce of the potash solution. Prolong the development until the image has nearly or quite faded away. If taken out of the developer too soon, the image will not be dense enough. If a sharp negative with good contrasts be desired, add half an ounce more of the potash to the solution. If you want a negative soft with delicate shadows and beautiful half-tones, then use half an ounce of the potash solution to three ounces of the metol solution. By varying the quantity of potash used, one can get any kind of negative desired.

Metol acts differently from almost any other developing agent. It is a very rapid developer in bringing out the detail quickly. The whole image comes up almost at once, leading the amateur who never has used it before, to think that his plate is flashing up from overexposure. While the image comes up fast, it requires time to gain density,— about three minutes from the first appearance of the image. Metol, usually, is combined with some other developing agent. With hydrochinon, its action is almost identical with pyro. When used in combination with pyro, it retards the action of the pyro, and allows great latitude of development.

### ANSWERS TO CORRESPONDENTS

H. W. Noyes.— You may send on your "Snow Scenes," as the announcement has been put over to the May number, owing to the mistake in setting the date. Portland, as you suggest, would be the more desirable city for the storing of the Maine collection of historic pictures. We shall be very glad of your assistance, and you have been enrolled as a charter member of the Guild. Circulars and special membership card will be sent you very soon.

George K. Bosworth.— In this number you will find notes in regard to size of negatives for the Historic Pictures. We shall be glad of your help.

Miss M. P. Sawyer.— A special charter membership card will be mailed you soon, together with circular giving full particulars in regard to the Guild.

G. Frank Radway.— Your locality is particularly rich in historic places, and we shall enroll you gladly as a charter member.

Mr. C. D. Hotchkiss.— We trust that we may have duplicates of the pictures in your fine historical album belonging to your Historical Society. A charter membership card and circulars will be mailed you at an early date.

W. H. Porterfield.— Tickets of membership and circulars giving full details of Guild work, will be sent you and your friend soon as circulars are ready for distribution.

Clara M.— The red spots on your aristo platino prints may be removed by rubbing them gently with a bit of surgeon's cotton dipped in a weak solution of muriatic acid.

E. D. J.— Yes; you will find it cheaper to buy the chemicals separately and mix your own developer. I do not approve of pyro as a developer to be used by young people. It is very poisonous, and there is no known antidote.

K. Embry.— The crackled look in your negative, and which appears in the print as a fine network, is due to the plate not being rocked during development. When the developer is first turned over the plate, the tray should be kept moving constantly.

Ellen M. W.— Papers suitable for mounting prints may be obtained at the PHOTO ERA office. It is not necessary to use an acid bath, except in very warm weather when there is danger of plates frilling. A "thimble" plate-lifter costs fifteen cents.

W. L. B.— The formula, given in the July, 1902, PHOTO ERA, for blue transparencies will be found to answer equally well for coating paper for blue-prints. It gives a brilliant blue and clear high lights, and no muddy shadows. It is not necessary to size or salt Whatman's drawing-paper before applying the blue-print solution.

Morris K.— If the yellow stain on your negative is produced by too much alkali in the developer it may be removed by soaking the plate in a solution made of five ounces of water, one ounce of citric acid, and one half ounce of alum. The plate must be well washed from hypo.

Ella Hendy.— A weak solution of gum dammar, dissolved in turpentine, makes a good retouching varnish. Take a little on a bit of surgeon's cotton or on the end of the finger and rub it on the places to be retouched. It requires just a thin coating of the varnish to give "tooth" to the surface of the film so that it takes the pencil well.

B. J. L.— Transparencies are made in the same way as lantern slides. The printing is by contact, and the plate is developed in a rather slow developer and one which will bring out good contrast. Metol hydroquinon is an excellent developer for transparencies, as it gives such excellent detail in the shadows.

Bertrand S.— It is not necessary to varnish negatives if one is careful in handling and storing them. The best medium for enclosing negatives is the commercial envelope, which may be bought for 4 x 5 plates as low as fifteen cents per hundred.

B. M. H.— Yes: by all means use non-halation plates in photographing interiors where there are many windows. They are not necessary when making interiors where windows do not come within the field of the lens. The exposure with non-halation plates must be twice as long as when the ordinary plate is used.

P. M. R.— The glycerin solution for flattening bromide prints may be used with equal success with Velox. Velox prints will usually remain flat if after they are dry they are straightened over the sharp edge of a drawer.

# Notes and News

DES MOINES, IOWA — The Photographers Association of Iowa will hold its Thirteenth Annual Convention at Des Moines, Iowa, May 19 to 22, inclusive. Secretary Townsend, of Muscatine, announces that it will be a no-prize convention, but a beautiful engraved certificate of rating will be given. The diploma is of sufficient excellency to be accepted and hung in the art gallery.

HARRISBURG, PA. — The Second Annual Convention of the Photographers Association of Pennsylvania, West Virginia, Maryland, and Delaware will be held at Harrisburg, Pa., May 26 to 29, inclusive. Gold, silver, and bronze medals will be awarded in the several classes, and a special prize of a silver loving cup, donated by Mr. W. F. Slater, of Philadelphia. The officers of this convention are: T. B. Clark, president, Indiana, Pa.; E. W. Brown, secretary, Beaver, Pa.; W. I. Goldman, treasurer, Reading, Pa.; J. E. Giffin, first vice-president, Wheeling, W. Va.; John Betz, Jr., second vice-president, 417 N. Washington street, Baltimore, Md.

LINCOLN, NEBRASKA — The Fourteenth Annual Convention of the Nebraska Photographers Association will be held at Lincoln, Neb., May 13 to 15 inclusive. Address all communications to E. R. Tyson, Nebraska City, Neb.

TAUNTON, MASS. — The Camera Club of this city have started a movement to secure from the photographers in this vicinity as many permanent prints of local views of historical interest as it is possible to obtain. It is proposed that this collection be glazed and framed neatly, cheaply, and durably as can be done, and all offered to the Historical Society for such purposes as its members may deem to be wise.

HAMILTON, ONT. — The annual exhibition of the Camera Club of this city was held March 28–30 inclusive, in the Museum of the Hamilton Association. A. G. Alexander wins the first trophy with gold medal for best collection of pictures, and C. F. Hunt, the second trophy with silver medal. Mrs. Robert Campbell receives a silver medal for best pictures by the lady members, J. Gadsby silver medal for best pictures of flowers, Walter Hill silver medal for best landscape pictures, and D. A. Souter silver medal for best figure study work.

COLUMBUS, OHIO — The Columbus, Ohio, Camera Club opened new headquarters April 1. The first general exhibit will consist of the PHOTO ERA pictures, loaned them for the purpose by the PHOTO ERA.

BOSTON, MASS. — The Boston Camera Club showed, during the last days of March, a collection of pictures by Mrs. T. H. Cabot that attracted considerable attention locally. The pictures were largely portraits, and showed the skill and good taste of the artist to excellent advantage.

PORTLAND, ME. — The Portland Camera Club will shortly occupy the rooms just fitted up in Congress Street of that city. It includes a large dark room, a parlor for exhibition purposes, and a studio with a large side light for photographic work.

DENVER, COL. — The fourth annual salon of the Colorado Camera Club was held at their new quarters in the Appel building of that city, beginning March 25. One hundred and seventy-six pictures were hung. The group includes the loan of the Photo Secessionist Club of New York.

INDIANAPOLIS, IND. We have received the following from George G. Holloway, secretary of Photographers' Association of America:

The National Convention will be held at Indianapolis, Ind., Aug. 4, 5, 6, and 7, in das Deutsche Haus.

DAS DEUTSCHE HAUS.

Many good things have been prepared for your benefit, and the leading lights of the profession will exhibit the finest work they ever made.

Send in some of your work, that we may see the progress you have made during the last year.

You will be surprised at the enormity of the exhibition this year. Every foot of floor space has been taken by the Manufacturers & Dealers, who are going to make the finest displays, in their respective lines, ever shown at a National Convention.

We want you to see how the Hoosiers do things, and we are going to treat you royally.

Remember, that the Photographer, Manufacturer, or Dealer who is not represented at the big National Convention this year announces to the world that he is not keeping Pace with the Times.

Are you keeping the Pace?

Those promises you made about sending in an exhibit should be kept, and don't forget that one promise fulfilled is better than a thousand broken ones. So get in line and help to keep the Pace.

Fraternally yours,

GEORGE G. HOLLOWAY,
Secretary P. A. of A.,
Terre Haute, Ind.

ROCHESTER, N. Y. The Quarter Century Photographic Competition, which is being conducted by the Bausch & Lomb Optical Company, and which closes Oct. 1 next, is attracting unusual attention among American photographers, from the fact that it is the only competition in recent times in which the merits of American photographic lenses have been tested, and it will be an extremely interesting epoch in the development of American photography as showing the results of the last quarter century's work in an industry which has heretofore been essentially European. Judging from the exhibits which have already been handed in, although the competition is not to close for eight months yet, there will be no cause for the users of American lenses to regret their choice.

BOSTON, MASS. During the past year the photographers of Boston and vicinity have enjoyed the privilege of listening to many well-known artists, who have addressed them at the Lens and Brush Club. Of these no one is more pleasantly remembered than Mr. John J. Enneking. Being one of the most prominent landscape painters in the country, he combines his well-grounded knowledge of all principles and wide experience with the ability to impart that knowledge in a pleasing and forceful manner, and his talks have been greatly appreciated by the photographers. Mr. Enneking has planned to close his studio shortly and spend the summer in Europe. He will hold an exhibition of all his work at the Beacon Galleries, 31 Beacon street, from April 6th to the 20th, after which it will be sold at auction.

This ought to be of special interest to the photographers, and it would be a graceful acknowledgment of the interest Mr. Enneking has manifested in them, if they would advertise the exhibition among their friends and do all in their power to make it a success.

Those who have noticed Lloyd & Co.'s Thornton Pickard advertisements will be interested to know that this firm sends a member abroad every year to visit the great European lens makers, the shutter people, the camera manufacturers, and other connections. This year Mr. Lloyd and Mr. John W. Collinson are the firm's representatives. To Mr. Collinson it will be like an Old Home Week, as he is English born and bred, and has had the great advantage of working in all the great English Optical factories since his youth. He has served with Ross, Dallmeyer, Beck, Taylor, Taylor & Hobson, and was one of the most expert photographic and astronomical lens makers in the United Kingdom. There is no part of the lens that Mr. Collinson has not done expert work on, and when he came to the United States, twelve years ago, he brought with him a thorough practical knowledge of photographic objectives that is rarely found — certainly not in the ordinary optical house.

We shall be surprised if his present visit does not result in some useful additions to his firm's stock, which will not be commonly found.

DUBLIN, IRELAND The regular annual exhibition of the Photographic Society of Ireland, was held in Dublin, March 23 to 28. The judges were Sir Walter Armstrong, James Brenan, A. Horsley Hinton, Prof. J. Joby, and Alfred Werner. Gold, silver, and bronze medals were awarded.

PARIS, FRANCE The Salon of the Paris Photo Club is announced for the 1st of May, and will continue for one month. Entry forms may be obtained from the secretary of the Photo Club, 44 Rue des Mathurins, Paris.

ST. PETERSBURG, RUSSIA An important exhibition of pictorial photography was held in St. Petersburg, Russia, under the patronage of the Grand Duke Michael and the Photographic Society of that city, opening on April 20. The collection of English pictures shown was largely made up of those shown recently at Turin in Italy.

OHIO-MICHIGAN PHOTOGRAPHERS' ASSOCIATION

The Executive Committee of the Ohio-Michigan Photographers' Association met at Toledo, Jan. 28, and decided on July 22, 23, and 24 as the date of their next convention, to be held at Saginaw, Mich.

The following rules were adopted to govern the exhibition of pictures: —

First: Exhibits may consist of one or a dozen pictures, any size, framed, or unframed.

Second: The Association will not be responsible for any loss or damage, but special precaution will be taken to ensure the safe return of all pictures submitted for exhibition.

Third: All pictures must be sent so that they may be judged by the hanging committee on the 21st of July. As provided by resolution, all pictures shall be judged by a committee of three artists and three photographers, with the president as chairman. It will be necessary for all photographers to send their pictures a few days in advance of the convention, so that they may be there on time for this hanging committee to make their selections.

Fourth: All pictures must be sent to Frank R. Bill, care of Masonic Temple, Saginaw, Mich., carriage prepaid, and delivered not later than July 20, 1903.

Fifth: Exhibits for manufacturers and dealers shall be sent in care of the secretary, F. W. Wolf, Saginaw, Mich., care of Masonic Temple. All charges prepaid, and must be placed in position on or before the opening of the convention.

Sixth: All boxes and packages will be accepted at any time before July 22, so that exhibitors need have no concern for the safety of their goods. No exhibit will be allowed to be removed before the close of the convention.

Seventh: No manufacturer or dealer shall be permitted to do business on the hall floor, unless he first secures space or desk room, and he shall, in addition, pay the entrance fee of two dollars ($2.00).

Dues must be paid to D. D. Spellman, treasurer, Detroit, Mich.

Membership fees, $3.00. Annual dues, $2.00.

A. L. Bowersox, Pres, Dayton, O.
F. W. Wolf, Sec'y, 1008 Pearl St., Cleveland O.

CAMBRIDGE, MASS. The Harvard Camera Club has elected the following officers for the ensuing year: M. D. Miller, 2M., president; E. Sohier Bryant, '06, vice-president; M. S. Watts, '05, secretary and treasurer; G. W. Outerbridge, '05, corresponding secretary; and W. C. Lane, F. L. Olmstead, '94, and J. B. Stetson, '06, members of the executive committee. In the latter part of April will be held the Second Photographic Exhibit with the Camera Club of the University of Pennsylvania. The pictures will be shown for about ten days at each university.

SAN FRANCISCO, CAL. The Third San Francisco Photographic Salon will be held in October, 1903.

In order to encourage liberal contributions from pictorial photographers at home and abroad, and to save the expense of framing pictures that may not be accepted, as well as the greater expense of transportation, pictures suitably mounted or matted will be received from contributors in the United States, and such as are accepted by the Jury of Selection will be glazed by the Salon Executive Committee at the exhibitor's expense. The Executive Committee are: A. L. Coombs, chairman; W. E. Palmer, C. A. Goe, G. G. Eisen, W. J. Street, J. W. Erwin, R. H. Fletcher. Address communications to Third San Francisco Photographic Salon, 819 Market street, Room 58, San Francisco, Cal.

READING, PENN. The second photographic exhibition of the Reading, Penn., Lantern Club will be held at the club rooms, in that city, from May 4 to 9, 1903. Pictures to be submitted should be in Reading not later than April 25. Address all communications to Fred E. Haas, 152 Buttonwood St., Reading, Penn.

CHICAGO, ILL. John F. Byrnes & Co., Chicago photographers, have secured the concession for the exclusive "photographic rights" at the St. Louis exposition. The concession is said to be worth $200,000.

MILFORD, N. H. The following have been elected as officers of the Milford Camera Club: President, Willis H. Parker; vice-president, Geo. M. Follett; secretary, Geo. Baker; treasurer, L. C. Hall; executive committee, E. Armstrong, G. M. McIntire, and L. M. Hall.

PUEBLO, COL. An enthusiastic meeting of camera workers was recently held at 17 Opera House Block, and the organization of a camera club effected. The following were elected officers: President, Herman W. Nash; vice-president, F. C. Rogers; secretary, A. F. Hummel.

ELMIRA, N. Y. The Elmira Camera Club held its first annual meeting for election of officers recently in Van Aken's studio. The following were elected to hold office for the ensuing year: President, Dr. A. B. Mitchell; vice-president, W. A. Pease; recording secretary, W. H. Arnold; corresponding secretary, Charles van Aken; treasurer, L. L. Ennis; and three directors, T. C. Fraley, H. L. Walker, and J. R. Hall.

CHATTANOOGA, TENN. The Third Annual Convention of the Photographers Association of Kentucky and Tennessee will be held at the Auditorium in this city, from June 16 to 19 inclusive. The officers are as follows: President, W. G. McFadden, Paducah, Ky.; first vice president, A. W. Judd, Chattanooga, Tenn.; second vice-president, F. J. Spengler, Lexington, Ky.; secretary, J. L. Cusick, Louisville, Ky.; treasurer, W. S. Lively, McMinnville, Tenn.

Medals and diplomas are among the awards to be made, and the grand prize is known as the Gatchell grand prize cup, to be given for the best set of pictures of eight inches or larger. We learn from the Sec. J. L. Cusick, of Louisville, that it promises to be the most successful convention in the history of the Association.

BROOKLYN, N. Y. The Brooklyn Camera Club has just elected the following officers at its regular March meeting. Edwin O. Torbohm, president; George D. Klippel, vice-president; U. G. Dodson, secretary; John Abrams, assistant secretary; Louis Drypolcher, librarian; Wm. H. Davies, treasurer; Andrew Switzer, financial secretary; Wallace Tiebout and George Orthel, directors.

An interesting lecture on Flash-light Portraiture was given by Mr. Wm. T. Rich, at the club rooms, 776 Manhattan Ave., on April 1.

# PHOTO ERA

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### *APRIL*

Winds are growing sweeter
Day by day;
Spring is here, the fields have seen her,
And are growing greener, greener,
And the woods have found so much
In the magic of her touch,
That the golden mist of April
Deepens with the May.

—*Goodale.*

It is a delight to get close to the great throbbing heart of nature this month and drink in abundantly the sweet influences that fill this wonderful April world.

In sheltered nooks, the hyacinths and tulips, sweet violets and anemones already lift their gentle faces to the sun, and the same sweet odors, grace, and colors greet our senses as of yore. Ever and anon

"The hooded clouds, like friars,
Tell their beads in drops of rain."

While the dripping sunshine and moisture together fill the air with fragrance and life, you had better give way before the charm of this picture and let its beauty caress your soul.

You who have the real love of nature in your heart, take your camera out into the open fields or by the sea. And if your soul be in tune you will catch a glimpse of Spring's white shoulders through the woodland openings, and hear a strain of her tinkling laughter. Your plates will show the sweep of the clouds across the April sky, the play of the waves along the shore, the trees bending beneath the breeze, and the sunlight shimmering over the stretching meadowlands and winding streams, and they will all be full of divine suggestion. The illusive, intangible, and subtle qualities in your negatives are the shadowy boundaries that separate the visible from the invisible world. They can be produced only when the imagination is stirred by the beauty of things round about you — and they can be imitated only with something of the Master's penetration into the heart of nature.

*Corot* Corot used to say that "art is a matter of the soul. Things you see and know all about are not worth painting; only the intangible is splendid."

The great French artist looked for beauty and found it in nature. He painted what he saw, it is true, but he saw things with a clearer vision than other men saw them, because he was made of finer clay than they were — and he could dream dreams their dull imaginations never could conceive of. There are sounds so subtle that our coarse, dull senses never recognize them, and there are delicate lights and shades, tints, and colors that the uneducated eye cannot detect. The veil that hides these manifestations of beauty and truth from the ordinary mortal was withdrawn for Corot, and he saw and did things born of the spirit. Instead of portraying every detail of leaf and blade of grass and dewdrop, he gave the effect of leaf and blade of grass and dewdrop in his pictures, without painting them at all. His pictures, therefore, were beyond skill of hand. They represented a subtle, spiritual quality, beyond the mere knowledge of technique,— what the world has since recognized and called by common consent, Art.

*Rembrandt* But the great Flemish painter, Rembrandt van Rijn, whose life was spent in mastering the science of light and shade, was and is, perhaps, to-day, the most interesting artist for photographers to study. He did not care for color effects in the sense that the French and Italian masters did, but rather for the proper distribution of masses of light in his pictures. Even in his most richly colored paintings the general effect is that of a photograph, or, strictly speaking, a study in light and shade. After seeing his love for these beautiful contrasts, one cannot but notice and enjoy more keenly the exquisite effects of light and shade even in the most commonplace surroundings. The proper arrangement of high lights and deep shadows is the most important part of any artistic photograph. A study of Rembrandt's work will show what wonderful effects can be obtained with one model in many positions, with different

arrangements of light. It cannot fail to be of great assistance to any photographer who loves beauty and seeks to reproduce it in his pictures.

***National Historic Picture Guild*** The call sent out by the PHOTO ERA, in February, for the establishment of a National Historic Picture Guild has met with a very flattering response. A large number of subscribers and readers from all over the country have sent in their names to be enrolled on the charter list. The great roster will soon be complete, and as soon as the organization takes definite shape, the work of embodying, in permanent photographic form, scenes and places characteristic of our country, its people, and its every-day life will be systematically begun. We receive daily a large number of encouraging letters which express appreciation of the work that is being done by the PHOTO ERA to establish the Guild. While these assurances are most gratifying, we feel confident that there are many others throughout the country who have the same kindly feeling toward the work and who have not yet written to offer suggestions or to join the Guild. To all such we say there is no small need of help in this direction. A few hints as to how best to perfect the work of organization would be greatly appreciated. First of all, we want new members. It is not very difficult when talking photography at the club or with a brother photographer to mention the Guild. It is a lesson in patriotism for which he will be grateful. Furthermore, "one tripod slave is always sympathizing with another." There is a bond of fellowship in photography that makes an ordinary introduction unnecessary. A few words, judiciously dropped at the right moment, may result in creating a future camera historian.

We hope shortly to have a good supply of literature upon the subject which we will gladly furnish on request. Meanwhile, should you find a victim near and not have the circulars at hand, request his address that you may have the Secretary of the Guild forward him the necessary papers at once. As stated above, we will cheerfully furnish information upon request,—and you will be helping along a great work that posterity will one day bless you for.

***Photography and Schools*** Perhaps one of the most impressive facts in educational work to-day is the widening scope of popular instruction. An eminent English educator who has recently been studying the American system of education declares that four things greatly impressed him.

1. The earnest belief, everywhere strikingly in evidence, that Americans believe heart and soul in education and the American school was radiant with the belief in its mission.

2. That for work of the earliest grades the harshest critic could give little else than praise. In the first four years of school life the child is stimulated to self-expression and self-realization by teachers skilful in their art and unwearied in their practice of it.

3. That teachers were endeavoring to tear out the non-essentials. They had a tendency to employ labor-saving appliances in education and to avoid to the utmost the waste of precious time.

4. That modern industry and business demanded the highest education, both technical and university training being indispensable, for successful competition. In conclusion, his judgment on this subject of education is said to be as highly regarded as that of any man living.

We submit that the adoption of photography as an educational appliance would be the crowning feature of the American school system. No other single influence that could be invoked would be fraught with so many blessings to both the teacher and pupil. Speed the day when the camera will become as necessary a part to every school outfit as the spelling-book or the blackboard!

***Sinews of War*** In connection with the establishment of the National Historic Picture Guild throughout the country, the question of an endowment has been suggested. No great public work can be long carried on successfully without an adequate supply of the sinews of war. Witness the equipment of such an institution as the Rockefeller Institute of Medical Research at the Johns Hopkins University in Baltimore; the endowment of men to carry on research in many fields of work by the Carnegie Institution; the recent public announcement of the gift of a million dollars to Barnard College; all these generous gifts have been made with a view to carrying on successfully a work in the interest of the public. A substantial endowment would undoubtedly make the Historic Picture Guild an assured success from the start. And we are led to inquire who will be the generous donor to first connect his name as founder, of this great public movemént, by furnishing it with the sinews of war?